

REMARKS

Applicants, their principal representatives in Germany, and the undersigned have carefully reviewed the first Office Action in the subject U.S. patent application, together with the prior art cited and relied on by the Examiner in the rejections of the claims. In response, the Substitute Specification and the claims of the application have been amended. It is believed that the claims now pending in the subject application are patentable over the prior art cited and relied on by the Examiner, taken either singly or in combination. Reexamination and reconsideration of the application, and allowance of the claims is respectfully requested.

The present application discloses and claims a continuous web mixing device and a method for mixing continuous webs. The several embodiments of the apparatus of the subject invention, as depicted in Figs. 1-4 of the drawings, allow the formation of a wide variety of folded newspaper products, typically in tabloid format. Examples of the wide variety of products which can be assembled or formed are depicted schematically in Fig. 5. One common theme of all of these depicted products is the provision of one component of the resultant product in which the several web sections or partial webs that form that component are stapled along a transverse line which becomes a fold line of the completed product. These stapled components are arranged, either with other stapled components or with other non-stapled components, or with both other stapled and non-stapled components, to form the desired printed product. It is the ability of the disclosed invention, both in the arrangement of constituent parts and in the method of operation provided by those constituent parts, to provide such a diverse range of products, that is different from the prior art. While there are depicted four embodiments of the subject invention, all have the ability to allow for the formation of the wide range of products, as depicted schematically, and as examples of what is possible, in Fig. 5. The depicted products in Fig. 5 are not to be construed as an exhaustive collection but instead of examples of what is possible through the use of the subject invention.

Referring initially to Fig. 1, there may be seen a first preferred embodiment of the subject invention. As discussed in the Substitute Specification, starting at paragraph 017, a continuous web 26 is conducted over a former 07. It is important to note that this continuous web 26 consists of a plurality of parallel extending individual paper webs which are assembled after having been printed, longitudinally cut and assembled. In other words, the continuous web 26 depicted in Fig. 1 is actually a web train that has a number of parallel webs arranged one on top of the other. This continuous web 26 is cut longitudinally by the longitudinal cutter 07 and the several sets of partial webs so formed are brought together in the associated former 02.

Once this group of several sets of partial webs have been directed to a deflector roller 09, they are divided into a first partial web 28 and a second partial web 27. Each of these partial webs still has a plurality of individual parallel webs in it. The second partial web 27, as depicted in Fig. 1, passes through a stapler 17. That stapler, as discussed at paragraph 020 of the Substitute Specification, staple together each of the partial webs 27 before the partial web 27 enters the folding device, generally at 19.

After the second partial web 27, which it is to be remembered actually consists of several parallel webs, has been stapled together by the stapler 17, it is associated with the first partial web 28 in the area of the outlet 18; i.e. before the transverse folding apparatus 19. In the configuration shown in Fig. 1, the stapled second partial web 27 will be closer to the surface of the collection and folding blade cylinder 22 than will the non-stapled first partial web 28. After these two partial webs 27 and 28 have been cross-folded, the resultant product will be as depicted in Fig. 5a.

The location of the stapler 17, as depicted in Fig. 1, can be easily changed. For example, the stapler could be repositioned so that the first partial web 28 is stapled together and the second partial web 27 is not stapled. The result is now a product more like the one shown in Fig. 5k. The first continuous web 24 can be included in the finished product, as depicted in Fig.

1.

The several additional embodiments of Figs. 2-4 are each somewhat distinct in their specific arrangements of staplers and partial web guide paths. The commonality of all of these embodiments is that at least one continuous web, which itself includes a plurality of parallel webs, can be longitudinally cut, formed, divided into at least first and second cut partial continuous webs and each of those cut partial continuous webs can be either stapled together or not stapled together and then combined with the other one of the partial webs, as well as possibly with another continuous web, to form a particular product with a specific product configuration. As indicated above, the various products depicted in Figs. 5a-5m are examples of the products which can be produced. They are not the only products that can be produced.

In the first Office Action of June 8, 2007 claims 29, 30, 32-34 and 38-55 were rejected under 35 USC 102(b) as being anticipated by U.S. patent No. 5,647,949 to Kepert. It was asserted that the Kepert reference discloses all of the elements of the apparatus and method recited in the claims against which it was applied. Claims 35-37 were rejected under 35 USC 103(a) as being unpatentable over U.S. patent No. 5,503,379 to Michalik in view of the Kepert reference. It was asserted that the Michalik and Kepert patents are combinable to render the subject invention obvious. For the reasons to be set forth below, the claims, as filed, and even more clearly as amended, are believed to be patentable over the prior art cited and relied on.

While the Kepert reference, at first glance, may look similar to the subject invention, as it is currently recited in the amended claims, there are actually a number of structural and functional differences between the Kepert device and the subject invention. In all of the Kepert embodiments there are provided two longitudinal fold formers, two work stations, and a cross folder. Each of the two work stations can have one of a glue applicator or a stapler. All of the webs which pass through the Kepert device are either glued or stapled. The final product always is comprised of webs that are glued or stapled. There are no webs that pass through the work stations without being either glued or stapled.

In Fig. 1 of Kepert, formers 3 and 4 each receive a paper web train 6 or 7, or plural paper strips 6.1; 6.2; 7.1 and 7.2. These web trains or plural paper strips pass over or beside the respective formers 3 and 4 to a work station, generally at 13. In the Fig. 1 embodiment, there is a gluing device 14 at the left side of the work station and a similar gluing device 38 at the right side of the work station. In each gluing device, the respective web trains 6 or 7, or the paper strips are separated. This is to facilitate the application of glue, by glue application cylinders 28, to one side of each web train or strip. The separated train 6 or 7 or the separated strips 6.1; 6.2 or 7.1; 7.2 are recombined after the respective glue application cylinders 28. The result is two glued together web trains 6 and 7 or two glued together paper web strips 6.1; 6.2 or 7.1; 7.2. These two glued together booklets are combined at drawings rollers 24 and are subsequently transversely folded by a folding device which is not specifically shown.

Fig. 2 of Kepert shows an alternative arrangement that uses a pair of staplers in the workstation 13. In this embodiment, the individual webs in each of the paper web trains 6 and 7, or the individual strips 6.1; 6.2 or 7.1, 7.2 are not separated as they are fed through the two stapling devices. The reason for the separation of the individual webs or strands in Fig. 1 was for the purpose of applying glue to an interior surface of one web or strand so that it could be glued to the interior surface of the other web or strand. Since, in the Fig. 2 embodiment, the web trains or plural strands that pass through each work station are all stapled, there is no need for any type of web separation.

Fig. 3 of Kepert shows a third embodiment of its device where there is provided a gluing device at the left side of the work station and a stapling device at the right side of the work station. The web train 6 or the strips 6.1; 6.2 in the left, gluing device of Fig. 3 of Kepert have to be physically separated so that glue can be applied to the interior surface of one of the webs or strands. The webs or strands 6 or 6.1; 6.2 are combined before the resultant web or strand arrive at the linear cutting device 19. In Fig. 3 of Kepert, as was the situation also in Figs. 1 and 2 thereof, the webs passing through each of the two sides of the work station 13 are always

joined together. Whether by being glued or stapled, each of the web trains 6 or 7 or the plural web strips 6:1; 6:2 or 7.1; 7.2 that pass through their respective sides of the work station 13 are joined together. The result is always the production of two fully connected booklets. Kepert does not anticipate or render obvious the subject invention, as recited in the currently pending claims.

In the subject invention, the intention is to provide a continuous web mixing device and a method for mixing continuous webs that will provide a wide range of production capabilities without the need to excessively turn the webs or to mix them, before the formers, with the use of turning bars. In the present invention, the continuous web, which is constituted of a plurality of parallel webs, is divided, after the former, into at least first and second partial continuous webs, each of which still is constituted of plural webs. Several partial web guide paths are provided for these first and second partial continuous webs. Not all of these partial web guide paths necessarily have staplers. The plurality of partial web strands that exit from each former can be treated in various different ways by the selection of the specific one of the at least first and second partial web guide paths which that specific partial web is selected to travel. In addition, the partial web strands from one former can be mixed with, or associated with partial web strands from another former. The result is a highly flexible apparatus and method wherein finished products with various stapled and not stapled components, arranged in a number of orientations, can be produced. It is only necessary to review the arrangements of Figs. 5a-5m to appreciate the flexibility that is provided by the subject arrangement.

In claim 29 of the subject application, as currently amended, there is recited the provision of at least first and second partial web guide paths associated with a single former and usable to simultaneously conduct the two partial continuous webs from the former to an outlet. At least one stapler is arranged in one of the two partial web guide paths and acts on one of the partial continuous webs. The other partial continuous web from the former does not pass through the stapler. The two partial webs are formed together at the outlet. Kepert clearly does not show the provision of two separate partial web paths associated with a single former. Kepert

also does not show or suggest the possibility of passing a partial web past a work station, for subsequent combination with a partial web that has passed through such a work station.

Currently amended claim 33 of the subject application recites there are two formers. Each of these two formers has web guide paths. The first former has two partial web guide paths and the second former has a continuous web guide path. The two partial web guide paths from the first former pass on both sides of the second former. The partial webs that pass along those partial web guide paths are united with the continuous web from the second former at the outlet of the web mixing device. Kepert clearly does not show or suggest such a structure.

Currently amended claim 46 is directed to a method for mixing continuous webs. It recites essentially a method that is equivalent to the apparatus recited in currently amended claim 29. In the method of claim 46 there is recited the conveying of first and second longitudinally cut and formed partial webs along first and second guide paths. A stapler is provided in at least one of the guide paths. One of the partial webs is stapled while the other is selectively not stapled. The two are then combined into a main continuous web. In the Kepert patent there are not shown or suggested two staplers associated with a single longitudinal former. Kepert, as discussed above, also does not show, or suggest the selective passage of one of two partial webs along a first path through the stapler, and the passage of the other along a second path. In Kepert, the two formers are each provided with a single path. The web that passes through each Kepert former is obligated to go through its associated stapler or gluing device. It is thus believed that independent claims 29, 33 and 46 are not anticipated by the Kepert reference.

Claim 35 was rejected under 35 USC 103(a) over Michalik in view of Kepert. It is believed that the combination of these two references does not render the subject invention, as recited in currently amended claim 35 obvious to one of skill in the art.

In the Michalik patent there is shown a device for making folded products. Michalik shows a first former 3 and a second former 4, as seen in Fig. 1. It also shows third and fourth

formers 1 and 2. Michalik does not show first and second longitudinal cutting device 33 and 34 associated with the first and second formers 3 and 4, respectively. The elements 33 and 34 of Michalik are partial web trains. These reference numerals are also used to denote elements of the folding blade cylinder 9. They are clearly not longitudinal cutting devices.

In the first Office Action, it is asserted that the Michalik patent shows first and second former guide paths associated with the formers 3 and 4. While there are depicted such former guide paths, they are not paths through which partial web strands from the formers can be caused to travel. They are instead alternative guide paths for all of the strands that exit from each of the formers 3 and 4.

In the Michalik device, the webs are cut between the adjacent formers and are not cut in the middle of the formers. The asserted partial trains of Michalik are strands that have been longitudinally folded but that have not been cut longitudinally. These trains can be guided along the paths that are shown in Fig. 1. Note in this connection the discussion set forth at Column 4, lines 9-21 of Michalik. Each partial web, from its respective former, can be assembled in the folder. The upper formers 3 and 4 are movable in the direction indicated by the arrow in Fig. 2 so that their webs can be folded separately from, or can be combined with the webs from the lower formers 1 and 2.

Claim 35 recites the provision of a first former with a first longitudinal cutting device and with at least one first former guide path showing a first stapler. A second former is associated with a second longitudinal cutting device and with a second former guide path having an associated stapler. At least one deflection roller is located intermediate the first and second formers. One of the first and second partial webs from the first former and of the first continuous web is conducted through one of the staplers which is associated with the other ones of the first and second formers. This is the arrangement depicted in Fig. 4 of the subject application. Michalik clearly does not show, or suggest this structure. The Kepert reference also does not supply the teachings missing from the Michalik reference.

It is noted that the Office Action is in error, in the assertion at page 4, that Kepert teaches a second deflection roller 27 or 36 adapted to guide the partial continuous webs around the staplers. In the Kepert reference, the rollers 27 and 36 are depicted as guiding web strands 6.2 and 7.2, respectively so that they will pass around the glue application cylinders 28 of the two gluing devices 14 and 38. As was discussed above, the web strips 6.1 and 6.2 or 7.1 and 7.2 need to be separated during use of the two gluing devices 14 and 38 so that glue can be applied to an inner surface of the strip 6.2 or 7.2. Neither of the rollers 27 or 36 are used in the Fig. 2 embodiment of Kepert, which shows two staplers. Only roller 27 is used in the Fig. 3 embodiment of Kepert which shows a gluing device 14 at the left of the work station 13 and a stapling device at the right side of the work station 13. It is thus clear that Michalik, in combination with Kepert does not render obvious the subject invention, as recited in currently amended claim 35.

The various dependent claims now pending in the subject application have been amended to conform their language to that of the one of the independent claims from which each depends. It is believed that these dependent claims are also allowable because of their dependencies.

The various references cited in the Office Action, but not applied against the claims, have been noted. Since they were not relied on in the rejections of the claims, no further discussion thereof is believed to be necessary.

SUMMARY

Several minor typographic errors in the Substitute Specification have been corrected. These corrections do not constitute any new matter and their entry is requested. Independent claims 29, 33, 35 and 46, as well as various ones of the dependent claims, have been amended. It is believed that the claims now pending in the subject application are patentable over the prior art cited and relied on, taken either singly or in combination. Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully submitted,

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